

ARG63056 anti-LAT antibody [LAT-01]

Package: 100 µg
Store at: -20°C

Summary

| | |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Description | Mouse Monoclonal antibody [LAT-01] recognizes LAT |
| Tested Reactivity | Hu |
| Species Does Not React With | Ms |
| Tested Application | FACS, IP, WB |
| Specificity | The clone LAT-01 reacts with Linker for activation of T cells (LAT), a 36-38 kDa transmembrane adaptor protein expressed by T cells, pre-B cells, NK cells, mast cells and platelets. |
| Host | Mouse |
| Clonality | Monoclonal |
| Clone | LAT-01 |
| Isotype | IgG1 |
| Target Name | LAT |
| Species | Human |
| Immunogen | Bacterially produced recombinant polypeptide corresponding to the entire cytoplasmic domain of human LAT. |
| Conjugation | Un-conjugated |
| Alternate Names | Linker for activation of T-cells family member 1; 36 kDa phospho-tyrosine adapter protein; pp36; LAT1; p36-38 |

Application Instructions

| Application table | Application | Dilution |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| | FACS | Assay-dependent |
| | IP | Assay-dependent |
| | WB | Assay-dependent |
| Application Note | IP: Tyrosine-phosphorylated form of LAT is not optimally recognized. * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist. | |

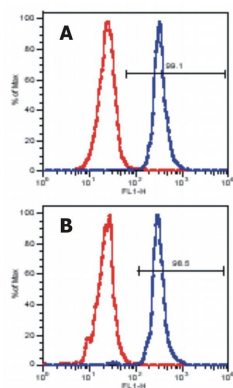
Properties

| | |
|--------------|-----------------------------------------------------------------------------------|
| Form | Liquid |
| Purification | Purified from hybridoma culture supernatant by protein A-affinity chromatography. |
| Purity | > 95% (by SDS-PAGE) |
| Buffer | PBS (pH 7.4) and 15 mM Sodium azide |

| | |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Preservative | 15 mM Sodium azide |
| Concentration | 1 mg/ml |
| Storage instruction | For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use. |
| Note | For laboratory research only, not for drug, diagnostic or other use. |

Bioinformation

| | |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Database links | GeneID: 27040 Human Swiss-port # O43561 Human |
| Gene Symbol | LAT |
| Gene Full Name | linker for activation of T cells |
| Background | LAT (Linker for Activation of T cells) is a 36-38 kDa double-palmitoylated transmembrane adaptor protein expressed by T cells, pre-B cells, NK cells, mast cells and platelets. After immunoreceptor triggering, LAT becomes multiply tyrosine-phosphorylated by Syk-, Src-, or Tec-family kinases, providing docking sites for downstream signaling molecules. LAT is essential for TCR-dependent T cell- and FcεRI-dependent mast cell activation, as well as for maturation of early thymocytes. It is also involved in NK cell signaling and platelet activation. |
| Function | Required for TCR (T-cell antigen receptor)- and pre-TCR-mediated signaling, both in mature T-cells and during their development. Involved in FCGR3 (low affinity immunoglobulin gamma Fc region receptor III)-mediated signaling in natural killer cells and FCER1 (high affinity immunoglobulin epsilon receptor)-mediated signaling in mast cells. Couples activation of these receptors and their associated kinases with distal intracellular events such as mobilization of intracellular calcium stores, PKC activation, MAPK activation or cytoskeletal reorganization through the recruitment of PLCG1, GRB2, GRAP2, and other signaling molecules. [UniProt] |
| Research Area | Immune System antibody; Signaling Transduction antibody |
| Calculated Mw | 28 kDa |
| PTM | Phosphorylated on tyrosines by ZAP70 upon TCR activation, or by SYK upon other immunoreceptor activation; which leads to the recruitment of multiple signaling molecules. Is one of the most prominently tyrosine-phosphorylated proteins detected following TCR engagement. May be dephosphorylated by PTPRJ. Phosphorylated by ITK leading to the recruitment of VAV1 to LAT-containing complexes. Palmitoylation of Cys-26 and Cys-29 is required for raft targeting and efficient phosphorylation. |



ARG63056 anti-LAT antibody [LAT-01] FACS image

Flow Cytometry: Peripheral blood lymphocytes stained with ARG63056 anti-LAT antibody [LAT-01]. (surface markers were stained prior to intracellular staining of human LAT).

Panel A: gate on CD4+ cells, Panel B: gate on CD8+ cells.